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ABSTRACT

While minority youth and adults have traditionally experienced high rates of unemployment, recent demographic, educational, and technological changes have all combined to cause a sharp increase in the numbers of unemployed and displaced minority group workers. A review of past employment and training programs such as the Comprehensive Employment and Training Act (CETA) reveals that they suffer from a variety of shortcomings, including a lack of effective transitional mechanisms for moving into unsubsidized jobs, a scarcity of successful models for upgrading employees to better positions, poor system coordination and ineffective program design, and a failure to involve private industry adequately in the design and operation of employment and training programs. Currently, the Ford Foundation is helping to address the employment-related problems of minority youth by performing the following activities: developing the basic literacy skills of dropouts and other high-risk youth; promoting public and private partnerships to address the training needs of high-risk and dropout youth; supporting research and policy studies involving youth, education, labor markets, and alternative forms of employment; and clarifying and testing ways in which displaced workers can adapt to the structural transformation of the labor market. (MN)

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Not Working:
Unskilled Youth and Displaced Adults

A look at the demographic, technological, and educational causes of youth and adult unemployment and at some program responses of the Ford Foundation.

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430 August 1983

PREFACE

The recognition of youth unemployment as a critical national problem increased significantly when, in the late 1960s and early 1970s, the postwar baby-boom cohort reached the age of transition from school to work. This transition, always a difficult period for youth, was complicated by the enormous size of this cohort, by increased competition from adult women and others for the available jobs, and by the reduced number of manufacturing jobs available as the U.S. economy continued its shift from an industrial to a service- and communications-based mode. Because the baby-boom group's transition into adulthood will be complete by 1985, policy makers and program planners are likely, before long, to turn their attention to other, more prominent social issues. But the core of the problem of youth unemployment--minority youth with limited education (especially high-school dropouts) who reside in central cities and average more than fifteen weeks of unemployment annually--may be exacerbated later in the 1980s as these youth come to comprise a greater portion of the young-adult population entering the labor force and as they experience higher unemployment, lower wages, and more involuntary part-time work than others of their age cohort during their adult years. In addition, the accelerating pace of structural (that is to say, fundamental and long-term) change in the U.S. labor market will continue to displace workers, resulting in what is known as structural unemployment: a mismatch between the skills of available workers and the requirements of available jobs. Needless to say, structural unemployment further complicates the problems of the economically disadvantaged.

The growing demands of displaced workers and of economically disadvantaged youth for the limited resources available will severely test the capability of the newly created federal job-training system. To meet those demands, that system must seek to develop new partnerships with, and between, the public and private sectors and to implement training programs ranging from remedial education to preparation for the high-technology jobs of the future. Early evidence suggests, however, that many nonprofit and community organizations are being left out of these new partnerships, despite their rapport with and access to those most in need.

Public and private responses to the problem of youth unemployment, the staff of the Ford Foundation believe, should emphasize the problems of minority central-city high-school dropouts and dropout-prone young people in the 16-to-21-year-old category. Program and policy explorations, discussed in the first section of this paper, focus on the basic literacy needs of these youth, on the role of competency-based education, and on the use of computerized education programs. The second section discusses promising models for linking education and work with the objective of providing the basic academic and world-of-work competencies and experiences that will be required to succeed in an increasingly technological workplace. The programs discussed would promote model partnerships in which government, community organizations, businesses, and training institutions would join in the design and operation of both entry-level and upper-level job-training programs. In the third section, research and policy issues in the field of youth employment

are identified and alternative employment and training approaches aimed at generating more jobs for the disadvantaged are presented. Since the design of job-training strategies cannot be divorced from the broader labor-market context, a fourth section discusses the need to clarify the character of the labor market's structural transformations, to identify possible adjustment strategies for displaced workers, and to develop appropriate training responses for disadvantaged entry-level youth.

Many individuals contributed their ideas and criticism during the preparation of this paper. Gilbert Steiner, Andrew Hahn, and Andrew Sum commented extensively on an early version. Eli Ginzberg, Frank Slobig, Edward Meade, and Sharon Rowser provided suggestions when the paper reached its final stages. Sar Levitan was particularly generous with his time over a two-month period, providing invaluable substantive and editorial advice. Roy Winnick was both patient and effective in completing the final editorial work.

Those interested in a more thorough treatment of many of the ideas presented here are encouraged to read A Fisherman's Guide: An Assessment of Training and Remediation Strategies by Robert Taggart; Getting Started by Paul Osterman; and Youth Employment and Public Policy, edited by Bernard Anderson and Isabel Sawhill.

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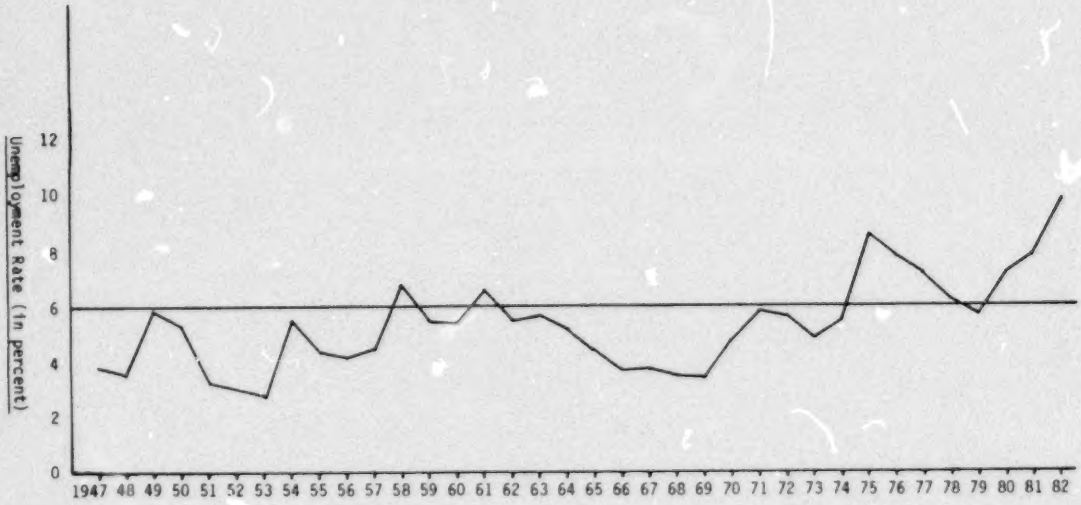
THE PROBLEM

Unemployment

Unemployment in the United States and other Western industrial nations approached 11 percent in late 1982 and early 1983, a level unequaled since 1940. In December 1982, the U.S. unemployment rate was 10.8 percent nationally, 24.0 percent for teenagers, 20.2 percent for blacks, 15.2 percent for Hispanics, and 50.1 percent for black teenagers sixteen to nineteen years old. More than 1.8 million people reported that they wanted a job but were too discouraged to search for one. As Figure I (on the next page) suggests, average levels of unemployment have been rising for nearly a decade. The overall unemployment rate averaged 9.7 percent in 1982 and is expected to average more than 10 percent in 1983. The overall rate of youth unemployment increased from 9 percent in 1968 to 24 percent in 1982. During the same period, unemployment among minority youth increased from 20 to 50 percent. More than 40 percent of the 12 million Americans unemployed in January 1983 were under twenty-five years of age.[1]

Unemployment has causes both on the demand side (an inadequate number of jobs) and on the supply side (a pool of workers lacking the education, skills, and/or attitudes required by employers). Shifts in the demographic characteristics of workers affect the balance between labor supply and demand, as do changes in workplace technologies. Market imperfections, including wage rigidities caused by union contracts and minimum-wage laws, discrimination, government regulation, and business-cycle adjustments, also have an impact on unemployment.

Figure 1. Annual Unemployment Rates in the United States, 1947-1982



Sources: Employment and Training Report of the President (1982), Table A-28, page 190, and Employment and Earnings (January 1983), Table A-1, page 11.

Demography

During the past decade, record numbers of women, of young people, and of legal and illegal immigrants have been added to the U.S. labor force, which, as a result, grew from 82.8 million in 1970 to 108.7 million in 1981 at an annual rate of 2.5 percent--more than twice as fast as in the 1950s. Many researchers point hopefully to 1985 as the date by which the problem of youth unemployment, and with it the related problems of national unemployment and low productivity, will have been partially solved. The demographic basis for this optimism can be seen in Table I (on the next page), which shows actual and projected percentage population changes in the United States from 1970 to 1990. The period from 1960 to 1970 was marked by a tremendous increase in the 16-to-24-year-old cohort of teenagers and young adults, while the data for 1970 to 1980 show significant declines in the group of all youth under nineteen years of age and significant increases in the group twenty-five to thirty-four years old. The projections for the period 1980 to 1990 show a major decline in the 16-to-24-year-old category of youth and the baby-boom cohort's movement into the 35-to-44-year-old category. More recent calculations based on the new 1980 Census figures place the population of new labor-force entrants fourteen to twenty-one years old at 32 million. That number will fall to less than 26 million in the early 1990s. Since December 1981 alone, the size of the teenaged labor force has dropped by 260,000. By 1985, in short, the postwar baby-boom cohort will have completed its passage into adulthood, thereby "outgrowing" many of its youth-unemployment problems.

But this prediction of lower levels of unemployment may not materialize, since a much higher proportion of those entering the workforce in the 1980s will be economically disadvantaged minority youth. The population

Table 1

Population Changes: Percent Increase by Age

Age	1960 - 1970	1970 - 1980	1980 - 1990
Under 10	5%	-14%	8%
16 - 19	36	9	-21
20 - 24	45	20	-15
25 - 34	1	37	12
35 - 44	-4	11	35
45 - 54	13	-20	11
55 - 64	18	13	-20

Source: Intermediate Fertility Projections, Department of Commerce, Bureau of the Census. Current Population Reports, Series P-25

of black youth in the labor force is expected to increase by 7 percent, the number of Hispanics even more.[2] The positive effects of a smaller total cohort will thus be offset, presaging continuing national productivity problems and an exacerbation of economic hardship for the disadvantaged. At a time when the technical-skill requirements for entry-level jobs are rising, employers will have a smaller and less able pool of young workers from which to choose.

In the absence of new restrictions, moreover, immigration is likely to increase the size of the entry workforce as increasing numbers of immigrants--legal and illegal--enter the United States in the coming decade. Leon Bouvier of the Population Reference Bureau estimates that if the large flow of undocumented workers continues unabated through the 1980s, total immigration could reach one million persons per year. And, because immigrant populations tend to concentrate in a few distinct geographic areas, the growing number of immigrants can be expected to have a significant impact, over time, on the school systems, labor markets, and social-service networks of the areas in which they settle. Immigrants are generally younger than the resident population; approximately 22.4 percent are under fifteen years old and some 43 percent are between the ages of twenty-five and thirty-four. Immigration in these age groups at rates comparable to today's would swell the labor force over the next ten to twenty years, increase the size of the youth cohort, add to the competition for entry-level jobs, and possibly raise the percentage of the population that is disadvantaged.[3]

Labor-market analysts also warn that youth and young adults aged sixteen to twenty-four will be forced to compete for part-time and entry-level jobs with a continuing flood of mature women, older workers, and displaced

blue-collar workers, all either entering or remaining in the workforce throughout the 1980s. Based on labor-market developments in the 1970s, the Bureau of Labor Statistics estimates that up to one million women, constituting two of every three new entrants, will enter the workforce each year for the balance of the decade.[4] At the same time, the trend toward early retirement, which slowed in the 1970s, may reverse as economic necessity, changes in the Social Security system, and the passage of new age-discrimination laws encourage many older workers to remain on the job. In a recent survey, one out of three working Americans polled said they would prefer to retire before age sixty-five, a marked contrast to the two out of three American workers who actually retire before age sixty-five today.[5] Finally, displaced workers with few transferable skills will be forced by economic necessity to accept any work they can get, thus adding to the pool of persons competing for entry-level jobs.

Incidence of Youth Unemployment

Most youth in the labor force are protected from the financial consequences of unemployment by family income. In addition, because completion of schooling is probably more important for future success in the labor market than initial work experience, the problem of teenage unemployment solves itself in most instances as teenagers mature into young adults. As Paul Osterman indicates, many unemployed teenagers are looking for part-time work, nearly a third are counted among the unemployed as they enter or reenter the labor market, and about one-half are in school and looking for work.[6] For the most part, the combination of child-labor laws, mandatory schooling requirements, and the reluctance of primary-labor-market employers to hire youth until they have

matured all work to consign those youth to marginal forms of employment including odd jobs, part-time clerking, casual construction work, and fast-food jobs. The "marginal" nature of the youth labor market, combined with the "in and out" characteristics of young people who are mixing work, school, and family responsibilities with social preferences, suggest that high rates of youth unemployment should not be surprising.[7] Youth unemployment is in large measure a function of the structure of the post-World War II youth labor market. The overwhelming majority of youth do successfully negotiate this labor market; they use it as an important job try-out period. But for some, the process of completing school, building a work record, moving from part-time to full-time employment and from low-wage, low-potential jobs to jobs permitting economic self-sufficiency and growth breaks down. The development of an effective strategy to counter this breakdown depends on the effective targeting of limited resources on those most likely to have problems.

Three useful indexes for analyzing patterns of youth unemployment are the unemployment rate, the labor-force participation rate, and the employment-to-population ratio. Unemployed persons are considered by the Bureau of Labor Statistics (BLS) to be those who have not been working for at least one month but who have been available, and actively looking, for work. People not looking for work are not considered unemployed; students and others actively seeking part-time or full-time work are. Those who say they want to work but who have not been actively seeking employment are classified, in BLS statistics, as discouraged workers. Youth unemployment figures reported monthly by the BLS include only youth aged sixteen to nineteen.

Table 2 (on page 12), which presents the unemployment rate by race, gender, and age at roughly ten-year intervals since 1954, illustrates the

Table 2

Unemployment Rate by Sex, Race, and Age

White Males

Ages	1954	1964	1974	1982
16 - 17	14.0	16.1	16.2	24.2
18 - 19	13.0	13.4	11.5	20.0
20 - 24	9.8	7.4	7.8	14.3
35 - 44	3.6	2.5	3.5	6.2

Black and Other Males*

	1954	1964	1974	1982
16 - 17	13.4	25.9	39.0	46.9
18 - 19	14.7	23.1	26.6	42.7
20 - 24	16.9	12.6	15.4	29.2
35 - 44	9.0	6.2	4.1	12.2

White Females

	1954	1964	1974	1982
16 - 17	12.0	17.1	15.4	21.2
18 - 19	9.4	13.2	13.0	17.6
20 - 24	6.4	7.1	8.2	10.9
35 - 44	4.9	4.5	4.3	6.4

Black and Other Females*

	1954	1964	1974	1982
16 - 17	19.1	36.5	36.2	41.1
18 - 19	21.6	29.2	33.7	45.3
20 - 24	13.2	18.3	18.0	26.8
35 - 44	7.3	7.8	6.7	10.1

* The "Black and Other" category in this and the following tables includes all persons who identified themselves in the enumeration process as being other than white. As of the 1980 Census, 83 percent of the respondents in this category were black. Historically, data on all persons of Hispanic ethnicity have not been reported independently; they have been included in the data for the white and black populations. Generally, Hispanics as a group fall about half-way between whites and blacks on the three measures reported in this table and in Tables 3 and 4. When the Hispanic groups are broken out independently, the data on those of Puerto Rican origin more closely resemble the labor-market statistics of blacks.

Sources: Employment and Training Report of the President (1981) and Employment and Earnings (January 1983).

rising levels of youth and young-adult unemployment as compared to that of prime-age adults. Several striking patterns can be seen: coincident with a rise in the youth-adult ratios of unemployment, the unemployment rate for black teenagers, initially comparable to that of white teenagers, has marched steadily upward, while the rate for white teens has remained stable or has increased only slightly.

But unemployment rates tell just a part of the story. The labor-force participation data in Table 3 (on page 14) indicate that comparable percentages of black youth and white youth were either working or looking for work until the mid-1960s. Beginning in 1964, a rising number and percentage of black males aged sixteen to nineteen years old were dropping out of the labor force, mainly as discouraged workers, while a rising percentage of white youth were moving into the labor force, either by working or by looking for work. The data for female teens mirror, though less dramatically, the divergence between the labor-force participation rates of black and white males. The participation rates for white female teens were rising while those for black female teens remained stable.

The employment-to-population ratios presented in Table 4 (on page 15) tell an even more discouraging tale. Rates for blacks and whites were comparable through the early 1960s but began, again, to diverge during the mid-1960s. By the mid-1970s, whites were 20 to 30 percent more likely to have jobs than blacks. The data show that absolute levels of white youth employment have been rising even though the unemployment rate has increased, while absolute employment levels for blacks have deteriorated significantly in every age category.

Researchers seeking to explain the significance of youth employment

Table 3

Civilian Labor Force Participation Rates
(in percent)

White Males

Ages	1954	1964	1974	1982
16 - 17	47.1	43.5	53.3	49.3
18 - 19	70.4	66.6	73.6	70.5
20 - 24	86.4	85.7	86.5	86.3
35 - 44	98.2	97.6	96.7	96.0

Black and Other Males

	1954	1964	1974	1982
16 - 17	46.7	37.3	34.6	26.3
18 - 19	78.4	67.2	62.4	54.9
20 - 24	91.1	89.4	82.1	77.0
35 - 44	96.6	94.4	90.9	90.2

White Females

	1954	1964	1974	1982
16 - 17	29.3	28.5	43.3	44.6
18 - 19	52.1	49.6	60.4	64.6
20 - 24	44.4	48.8	63.8	71.8
35 - 44	39.4	43.3	53.7	67.5

Black and Other Females

	1954	1964	1974	1982
16 - 17	24.5	19.5	24.2	24.1
18 - 19	37.7	46.5	44.6	44.5
20 - 24	49.6	53.6	58.2	59.9
35 - 44	57.5	58.4	61.5	70.8

Source: Employment and Training Report of the President (1981) and Employment and Earnings (January 1983).

Table 4

Employment-to-Population Ratios
(Percent of Total Noninstitutional Population with a Job)

White Males

Ages	1954	1964	1974	1982
16 - 17	40.6	36.5	44.[illegible]	37.2
18 - 19	62.3	57.7	65.0	53.3
20 - 24	77.9	79.3	78.7	69.3
35 - 44	94.7	95.1	94.1	88.4

Black and Other Males

	1954	1964	1974	1982
16 - 17	40.4	27.6	20.7	13.8
18 - 19	66.5	51.8	43.8	29.2
20 - 24	75.9	78.1	65.5	48.1
35 - 44	87.9	88.5	83.0	76.9

White Females

	1954	1964	1974	1982
16 - 17	25.8	23.6	35.8	35.1
18 - 19	47.2	43.0	52.6	52.9
20 - 24	41.6	45.3	57.9	63.4
35 - 44	37.4	41.3	51.4	63.[illegible]

Black and Other Females

	1954	1964	1974	1982
16 - 17	19.8	12.5	15.2	14.2
18 - 19	29.9	32.9	28.9	24.0
20 - 24	43.1	43.7	46.3	43.2
35 - 44	53.3	53.8	56.2	63.5

Source: Employment and Earnings (January 1983).

problems have found that a small group, containing some whites but mostly blacks and averaging fifteen weeks or more of unemployment annually, accounts for between 70 and 80 percent of the total weeks of youth unemployment. These individuals, who experience long bouts of unemployment, do not show improved employability as they grow older.[8]

Geography and Education

The deteriorating position of black youth has been correlated with the migration of such youth from rural to metropolitan areas. In 1950, 32 percent of nonwhite males aged eighteen to nineteen lived in rural areas and had a reported unemployment rate of 3 percent, while the reported rate for similar males living in central cities was 20 percent. By the late 1970s, nearly 41 percent of nonwhite youth had moved to central cities, as compared to 6 percent of white youth.[9] The unemployment rate for youth sixteen to nineteen years old living in areas of urban poverty increased nearly six percentage points--from 34.4 to 41 percent--between 1981 and 1982. By contrast, the unemployment rates for the same age group but in nonpoverty areas rose from 18.4 to 21.6 percent during the same period. As Sar Levitan indicates, the inner cores of the nation's largest cities pose a special labor-market problem for those who grow up there. Every major city in the United States has experienced a massive outflow of jobs in manufacturing, construction, and the wholesale and retail trades--the industries that have traditionally supplied most of the entry-level jobs for those without advanced skills.[10] That outflow of basic industrial jobs has accelerated dramatically during the current recession.

Functional illiteracy is a cause of unemployment for youth as well as for adults. Researchers estimate that more than 23 million people in the United States are functional illiterates; another 13 percent are high-school graduates who cannot read above sixth-grade level.[11] After a national survey of literacy levels among young people eighteen to twenty-three years old, the U.S. Defense Department, in a 1980 study, concluded that 7.2 million young people, 28 percent of the total young-adult population, were reading below eighth-grade level.[12] The population of illiterates is further swelled by the one million youths who drop out of school each year. In 1980, 15 percent of white, 21 percent of black, and 39 percent of Hispanic youth aged eighteen to nineteen were not enrolled in school and did not have high-school diplomas.[13] Many of these youth are unable to read a help-wanted ad or to fill out a job application. In 1981, the unemployment rate among black high-school dropouts was 71.4 percent. The problem of functional illiteracy among minorities has been growing despite rising rates of black school enrollment. As changes in technology continue to increase the complexity of the workplace and of the living environment, the threshold levels for functional literacy are likely to rise.

Table 5 (on page 18) shows that even those minority members who complete high school experience unemployment rates twice those of whites. In fact, black high-school graduates have a higher unemployment rate than white high school dropouts. Still, high-school graduation adds ten or more percentage points to the likelihood that a nonwhite youth will be employed. Even after the impact of such variables as geographic location, education and skill-level differences, school enrollment rates, job contacts, and willingness to work have been weighed as factors contributing to the higher

Table 5

Labor-Force Participation Rates and Unemployment Rates
of High-School Graduates and Dropouts
(in percent)

High-School Graduates (1981)*	Labor-Force Participation Rates	Unemployment Rate
Whites	86.6	17.1
Blacks	69.6	53.5
Hispanics	71.4	28.0
High-School Dropouts (1980-81)		
Whites	68.2	29.2
Blacks	46.7	71.4
Hispanics	67.2	35.0

* Excluding those in college.

Source: Bureau of Labor Statistics News Release USDL 82-175, (May 20, 1982).

rates of unemployment experienced by blacks as compared to whites, up to half the difference remains unaccounted for. Discrimination must explain a significant portion of minority unemployment. Anecdotal interviews with employers, as well as results of various surveys of employer hiring patterns, invariably indicate that employers want young people to have basic academic skills in reading, writing, and math. But the secondary-labor-market employers who provide the majority of jobs for youth generally do not make use of standardized, objective tests as part of their screening and hiring process. Instead, they rely on first impressions of such factors as the applicant's race and verbal skills to help "measure" the applicant's educational levels, likely job performance, and reliability.

Poorly educated minority youth--especially dropouts--living in central cities constitute the core of the problem of youth unemployment. The obstacles such youth face--low skill levels, limited education, inadequate work experience, discrimination, and poor information about the labor market--tend to accrete over time and eventually to become all but irreversible. As a result, these youth are more likely to experience unemployment, low wages, and involuntary part-time work. The mismatch between their skills and the requirements of available jobs results in teenagers contributing disproportionately to the nation's growing problem of structural unemployment and to the growing group of workers experiencing economic hardship because they are unable to earn enough to raise their personal or family income above the poverty level.

Economic Hardship

Approximately 28 percent of the nation's workers fail to earn the equivalent

of the minimum wage for the hours they work combined with the hours in which they are available for work but unable to find it. In 1981 the number of people with such inadequate individual earnings, 34 million, was more than twice the average number of unemployed workers. While half of these low earners live in families with other breadwinners, 17 million had total family earnings below the poverty threshold. Low hourly earnings and involuntarily restricted hours of employment are more significant overall causes of labor-market-related hardship than joblessness. While the number of workers experiencing hardship declines when overall unemployment rates fall, and while the number rises during recessions, the earnings of so many workers are so low that an enormous drop in the unemployment rate is necessary to achieve even a modest percentage decline in economic hardship.[14] Such measures of hardship as the minimum wage equivalency and family poverty status suggest that improvements in labor-market opportunities alone will not solve the income problems of more than a quarter of the nation's working poor. A mixture of income-support strategies to supplement low wages, macroeconomic policies to stimulate full employment, alternative job-creation approaches, and training strategies to raise the skill levels of workers will be required.

Targeting training resources on those young people who will experience future structural unemployment, underemployment, inadequate earnings, and thus labor-market-related economic hardship is an important long-term solution. But designing effective training strategies requires an understanding of the jobs of tomorrow and the skills they will require.

Technology and the Restructuring of Work

Among the factors that will influence the number and nature of jobs held by

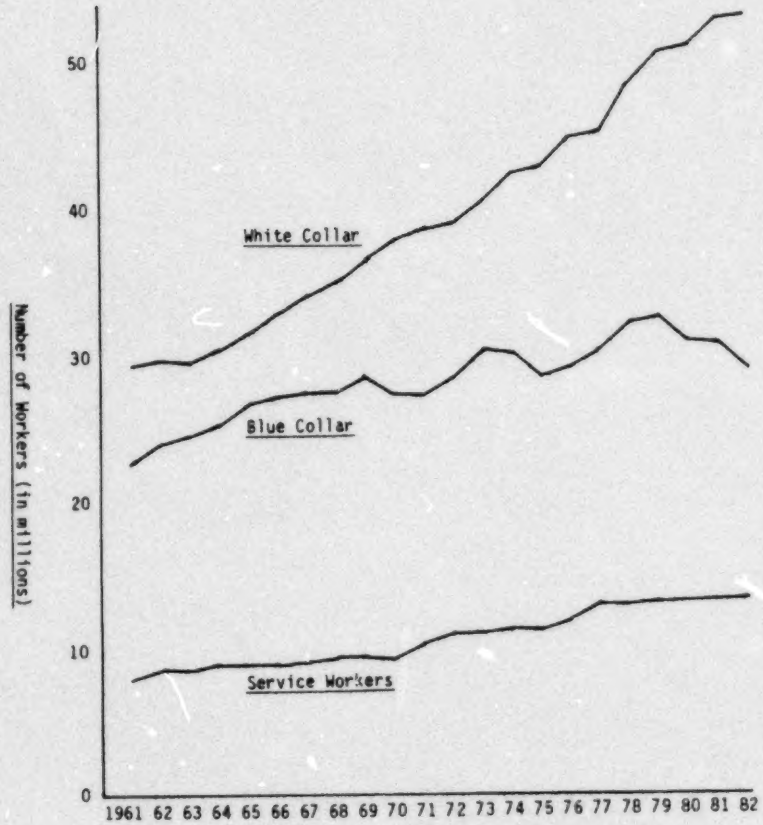
youth and adults over the next decade, two of the most important may be the internationalization of the economy and changes in technologies. These two factors, in combination with macroeconomic policies, are expected to result in a continuation of the shift, begun two decades ago, from an industrial to a service- and information-based economy--a shift as momentous as the earlier transformation from an agricultural to an industrial economy. Whether the change will be accompanied by a comparable geographic movement of people remains to be seen, but it is plausible that manufacturing, over time, will go the way of agriculture, which, from a twentieth-century high of 40 percent in 1900, currently employs only 3 percent of the U.S. labor force.

Experts predict slow growth or even a decline in employment in many basic industries. By the end of 1982, only 18.8 million Americans, comprising 21.7 percent of the nonagricultural work force, held manufacturing jobs, down from 34 percent in 1950. Between July 1981 and September 1982 alone, employment among blue-collar workers declined 2.0 million to a five year low of 29.1 million. The 1981-82 recession, which was the immediate cause of much of the problem, also masked more fundamental shifts in the economy. The Department of Labor reported that 13,175 plants had closed since 1975 and that more than 1,500 of these were in the steel, auto, rubber, textile, and apparel industries. Employment in the steel industry alone had decreased 14 percent and the unemployment rate in that industry during the recession was nearly 30 percent. During the same period, the unemployment rate in the auto industry was about 21 percent.[15] Unlike past recessions, many plants currently closed are not expected to reopen as the economy recovers. Those that do reopen will be forced by increased international competition to employ fewer workers and to rely as much as possible on automated systems.

By comparison, service employment since 1961 has shown steady growth (See Figures 2 and 3 on pages 23 and 24, respectively). At the end of 1982, some 73 percent of all Americans were employed in service-producing and white-collar jobs, including jobs in hotels, eating and drinking establishments, repair shops, personal services, recreation, health services, legal services, education, and offices. Of the 20 million net new jobs added to the U.S. economy in the 1970s, more than 90 percent were in the service sector. Even during the recession, the total number of service workers actually increased, rising 1.1 million between 1980 and 1982 (though these services-only increase were partially offset by declines in government employment levels). But service work should be examined carefully. Some low-wage service occupations, such as those in fast-food restaurants, may expand while offering only limited earnings potential. Other similarly low-skilled service occupations, such as doorkeeper and waiter/waitress, will continue to offer good income potential for some. Service occupations in such white-collar fields as banking, law, accounting, communications, consulting, and marketing are, on the other hand, education-intensive, lead frequently to positions in major corporations, and thus offer greater income, prestige, and advancement possibilities. Between July 1981 and December 1982, white-collar employment, despite the recession, increased by more than 600,000, with increases among professional, technical, and sales workers more than offsetting declines among clerical workers.[16]

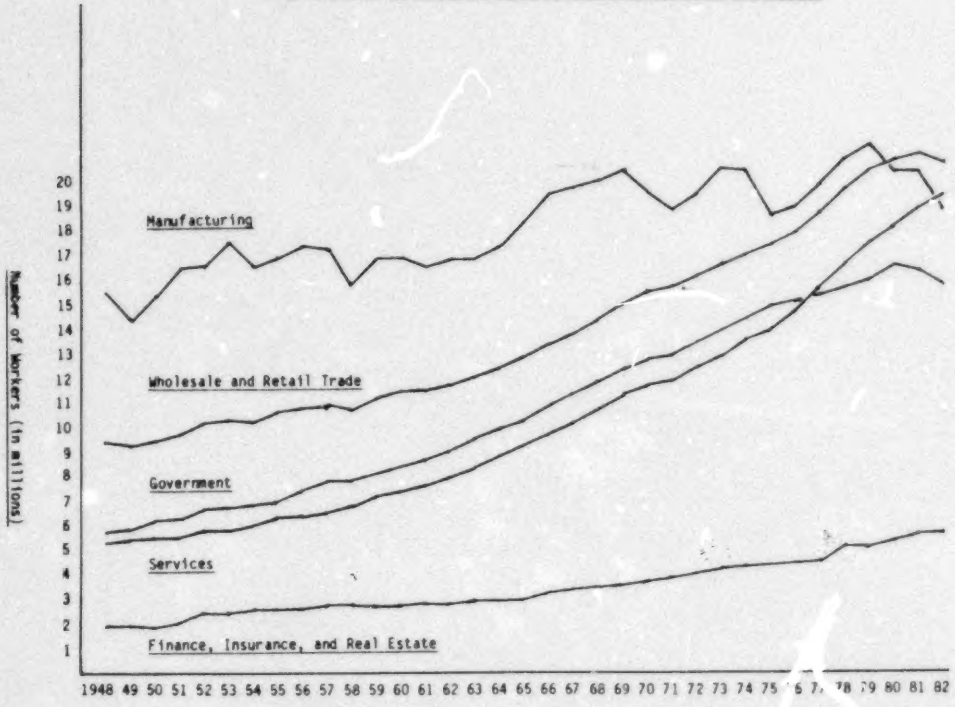
Two important consequences of these shifts stand out. First, plant closings will probably continue to present serious problems and may require a range of responses throughout the 1980s at the national, state, city, community, company, plant, union, and individual levels. Second, the old

Figure 2. Number of Employed People, by Type of Occupation, 1961-1982



Sources: Employment and Training Report of the President (1982), Table A-18, page 177, and Employment and Earnings (January 1983), Table 21, page 156.

Figure 3. The Changing Occupational Structure, 1948-1982



Sources: Employment and Training Report of the President (1982), Table C, page 239, and Employment and Earnings (January 1983), Table B-1, page 71.

career model in which workers steadily make their way up their company's internal career ladder from entry-level to primary-labor-market jobs (the latter being jobs that pay well and offer good growth potential) may be increasingly obsolete. As economist Eli Ginzberg points out, education and training not available at work are now required for placement in most technical, managerial, and professional service-sector jobs.[17] Similarly, the consumer-service jobs most suitable to low-skilled workers with limited education do not possess internal career ladders that can lead into the higher-paying service sector. Unless unions are more effective in orgainzing the service sector than they have been so far, the prerequisites for success in the industrial age (good health, a strong back, and a willingness to work hard) may not be enough to obtain middle-class wages in the information age.

The speed with which these changes take place will determine the scope of future dislocations. But predictions based on assumptions and aggregate historical trends are notoriously unreliable. Dire predictions that automation would cause continuing, massive unemployment generated an automation scare in the 1960s. Once the cyclical recession was over and unemployment receded, however, the nation turned its attention to other issues, including the hard-to-employ. While some workers were displaced by automation, many more jobs were created by it than lost. Adjustments occurred slowly and smoothly.

Some labor experts, scoffing at comparisons between the situation today and that in 1960, believe that microchip technology will precipitate changes on a scale previously unparalleled. A study by Carnegie-Mellon University predicts that robots will supplant 3 million workers by the year 2000 as robotics-industry sales rise from $89 million in 1980 to an estimated

$4 billion by 1995. General Motors executives forecast that by 1988, only five years from now, computers and robots will control 90 percent of GM's production machinery. In a 1982 study, the Northeast-Midwest Institute warned that robotic and foreign competition could result in the loss of 10 million to 15 million manufacturing jobs by the year 2000. The new techology promises to revolutionize the office as well as the factory.[18]

Sar Levitan and Clifford Johnson caution, however, that the actual pace of change will depend upon the relative costs of labor, the availability of capital, the rate of capacity utilization, and the attitudes of people. These factors, they suggest, will act as economic and psychological governors, limiting the speed of technological change and thereby mitigating employment disruptions. Robotics International, an industrial-robotics professional group, recently polled 100 users and manufacturers of robots and concluded that robots are likely to replace 440,000 rather than a million workers by 1990, and that all but 5 percent of those workers will be retrained rather than displaced.[19]

Bureau of Labor Statistics estimates of the percentage of growth in employment in various occupations between 1980 and 1990, which appear in Table 6 (on page 27), seem to support the contention that education and training will be essential to the jobs of the future. With two exceptions--correction officials and food service workers--the twenty fastest-growing occupations during the 1980s will require significant amounts of education beyond the high-school degree, most of it not obtainable on the job.

Table 7 (on page 28), a projection of the total number of new jobs in various occupations between 1980 and 1990, tells a somewhat different story.

Table 6

Percentage Growth in Employment by Occupation, 1980-1990, Plus Total Projected Employment Level

	% Growth	Employment Level (000)
Paralegal Personnel	108.9	65.8
Data Processing Machine Mechanics	93.2	160.4
Title Searchers	78.5	12.4
Computer Operators	71.6	316.4
Title Examiner/Abstractors	70.6	17.4
Computer Systems Analysts	67.7	343.2
Office Machine and Cash Register Servicers	59.8	88.5
Dietetic Technicians	56.6	9.1
Continuous Mine Machine Mechanics	54.5	13.1
Fast-food Service Workers	49.6	1,206.3
Computer Programmers	48.9	339.9
Tax Preparers	48.6	46.2
Physical Therapy Technicians	47.9	16.7
Claim Examiners	47.3	32.5
Employment Interviewers	47.0	85.6
Speech and Hearing Clinicians	46.6	51.6
Correction Officials and Jailers	46.5	151.6
Mine Machine Mechanics	46.0	26.4
Therapists	44.7	216.5
Peripheral EDP Equipment Operators	44.0	70.1

Source: Bureau of Labor Statistics, Occupational Projections and Training Data (1982).

Table 7

Projected Increase in Employment Levels by Occupation, 1980-1990 (thousands)

	Total (1990)	Increase
Secretaries	3,168.7	699.7
Nurses' Aides and Orderlies	1,682.3	507.7
Janitors and Sextons	3,252.5	501.3
Sales Clerks	3,359.2	479.3
Cashiers	2,044.6	452.1
Professional Nurses	1,541.5	437.5
Truck Drivers	2,111.5	415.2
Food Service Workers, Fast Food Restaurant	1,206.3	400.0
General Clerks, Office	2,772.2	377.5
Waiters and Waitresses	2,071.6	360.3
Bookkeepers and Accounting Clerks	1,974.8	360.3
Elementary School Teachers	1,536.6	251.0
Other Assemblers	1,462.2	242.7
Laborers	2,706.6	235.2
Kitchen Helpers	1,070.7	231.3
Accountants and Auditors	1,053.9	220.7
Helpers, Trades	1,167.1	212.2
Automotive Mechanics	1,052.1	206.4
Blue Collar Worker Supervisors	1,503.1	206.1
Typists	1,254.3	187.1

Source: Bureau of Labor Statistics, Occupational Projections and Training Data (1982).

Most new jobs, it suggests, will be in unskilled or semiskilled traditional occupations. If this is so, there should be many new jobs available for the disadvantaged, though many of these new jobs will be in the secondary labor market, and as such will be temporary, low-paying, and lacking in opportunity for career advancement. Unless new means of ameliorating the economic hardship problems of the working poor who will fill these jobs are devised, many will be forced to mix work with income-transfer payments if they are to stay above the poverty line.

The havoc that technology can play with these forecasts is illustrated in the following example. According to Bureau of Labor Statistics estimates, secretarial work will account for 700,000 new jobs, the largest single category of projected new jobs through 1990. It is currently the major occupation of women, a group increasingly responsible for the support of the nation's children. However, as economist Barbara Bergman warns, during the next decade word processors may eliminate many jobs for typists, secretaries, and other clerical workers. She cites estimates of SRI International showing that the number of electronic work stations operated by white-collar workers will grow from 2.5 million in 1980 to 17.5 million by 1990. Word processors eliminate the need for clean-copy typing by speeding the editing and retyping process. If managers, executives, and other professionals utilize word processors to type first drafts, the demand for typists could be significantly reduced. The negative impact on BLS's predictions, and particularly the consequences for women workers, could be serious.[20]

Successfully addressing the employment and training needs of disadvantaged youth and other groups requires an understanding of these work-related shifts in technology. Furthermore, the prospects for these

groups cannot be divorced from those of blue-collar workers and other key groups with whom they will be competing. But the experts disagree on the nature, speed, and significance of the changes. Clarifying future labor-force patterns will require answers to four questions. First, will most future job growth be in low-skill occupations or in highly technical occupations? Second, will shifts in the economy eliminate more or fewer jobs than are created? Third, will continuing problems of low growth, low productivity, and a stagnant economy further exacerbate the labor-force problems of the economically disadvantaged? Fourth, what effect will government immigration, defense, tariff, and regulation policies have on the labor market? Efforts to develop solutions to the labor-force problems of disadvantaged youth will depend, in part, on the answers to these questions.

PROGRAMS FROM THE PAST

More than most other industrial countries, the United States depends on the education system only to prepare workers for entry-level positions; occupation-specific skills are usually acquired on the job rather than through formalized training. As the figures below illustrate, about $146 billion, 90 percent of the $161 billion in FY 1980 public expenditures for human-resource development, were allocated to the formal education system.

Public Expenditures for Human-Resource Development[21]
FY 1980 (in billions)

Elementary and Secondary Education	$94.5
Higher Education	40.3
Secondary and Postsecondary Vocational Education	10.9
Military Training	10.0
Veterans' Training	2.2
Vocation Rehabilitation	1.2
CETA Training	2.0

Improving the overall effectiveness of employment and training programs is problematic because these programs are carried out by a diverse and essentially independent array of institutions and agencies including the vocational education system, secondary schools, colleges and universities, military-training programs, and institutions supported by the Comprehensive Employment and Training Act (CETA). Each system has developed its own curricula, tests, and competency standards, which have not been cross-referenced or standardized despite the fact that individuals frequently move from one system to another. For those who do not make it in the education system, onto a job ladder in the labor market, or into the military, the options are limited. CETA programs have been the major source of training

for disadvantaged people who do not make it in other systems. But CETA funds now account for less than 2 percent of all public expenditures for human-resource development.[22]

CETA Programs for Youth

Programs to address the needs of youth were a major focus of the CETA system from 1977 to 1981. The Youth Employment and Demonstration Projects Act of 1977 (YEDPA), an extension of the Comprehensive Employment and Training Act of 1973, increased the funds targeted on youth employment and employability development from $1.5 billion to $3 billion per year.

YEDPA created four new categories of youth-related activity: a Youth Employment and Training Program, which provided a combination of standard and innovative training approaches plus career-awareness and work-experience programs; Youth Community Conservation and Improvement Projects, which combined schooling with work experience on local economic-development projects; the Young Adult Conservation Corps, which provided employment in conservation work on public lands; and Youth Incentive Entitlement Pilot Projects, which experimented with guaranteeing part-time and summer jobs to youth willing to stay in school or return to school.

Most of the funds expended each year under YEDPA were used to pay wages and stipends in public-service-employment and work-experience programs. Evaluations of the impact of in-school work experience, intensive work experience for out-of-school youth, and short-term summer work experience found that these programs were major employers of minority youth. In fiscal 1979, CETA programs provided nearly half a million person-years of employment for 14-to-21-year-olds. Nonwhite youth filled almost half of the subsidized

jobs. Over two-fifths of all black youth fourteen to nineteen years old who worked during 1979, and almost a fourth of all Hispanic youth with jobs, were employed in a CETA program.[23] While work-experience programs played a critical role in supplying many young people with a first job experience, with income, and with alternatives to street life, there is little evidence to suggest that they provided the training, the experience, or the skills these young people needed to improve their future employment prospects, their future earnings, or their access to jobs in the primary labor market. This is not to say that employment is unimportant. Available evidence demonstrates that the more job experience one has throughout high school, the smoother the school-to-work transition experience is likely to be. But the evidence also suggests that the post-program earnings and employment impacts of youth and adult employment programs increase significantly as the intensity of their education and training components increases.[24]

In FY 1980, YEDPA funds expended on youth totaled approximately $580 million, of which $470 million was used to support the Job Corps program for dropout youth. Most training-program activities were aimed at smoothing the school-to-work transition process; less emphasis was placed on the needs of school dropouts and young adults with inadequate basic-literacy skills. Most of these programs concentrated on quick transition services and "soft" world-of-work or short-term clerical training. The focus was on job placement, but the limited education and the lack of a degree and other credentials of the youth in these programs meant that most had to settle for secondary-labor-market jobs paying low wages and affording little opportunity for career advancement. Unfortunately, little if any emphasis was placed on remedial-education programs or on higher-quality training for primary-

labor-market jobs for youth with adequate basic skills. Yet a student's tested reading ability upon entry to an employment and training program was, with the exception of race, the single best predictor of whether a young person would benefit from such a program.

Three important lessons emerged from an examination of successful demonstration projects for youth. The first, confirmed by analysis of the Career Intern Program and the Experience Based Career Education Program, was the importance of combining education with related work experience. Young people participating in these programs, which emphasize general education, basic skills, good learning habits, and real-job training, have shown significant improvement in work attitudes, social and work skills, basic literacy, and the ability to obtain and hold a job.

Although inadequate attention has been paid to the problems of dropout youth, several promising models have been developed that also combine education and work experience. The Mexican American Unity Council's Career Opportunity Project (COP) and the Vera Institute of Justice's Court Employment Project provide a half day of work in return for a half day of attendance in an alternative school. Materials and problems used in the classroom are job-relevant, encouraging previously unreachable youth to gain new interest in math, reading, and writing skills. COP linked basic education and private-sector work experience by requiring that participating youth raise their basic educational skills to a predetermined level before a part-time job is provided. Then, after additional benchmarks--such as successful completion of the General Educational Development test--are achieved, a full-time job is offered.

The residential Job Corps program for dropout youth may also provide some relevant lessons for successfully linking education and work in less

costly, nonresidential settings. The Job Corps is an alternative learning environment providing basic education, vocational training, pre-employment services, and life-skills training to a mostly minor-age, economically disadvantaged population having an average reading level below sixth-grade level at the time of entry. The system uses an individualized, self-paced instructional system with competency tests after each unit of instruction and an open-entry, open-exit format. A four-year, longitudinal evaluation of the Job Corps found that enrollees earn, on average, $600 per year more than a control group of similar youth.[25] An effort to update the Job Corps's materials, incorporate new approaches, and test the program's effectiveness was recently completed. It included a pilot test integrating computer-assisted instruction approaches with the traditional Job Corps curriculum. Together, they produced reading gains averaging more than 2.0 grade levels after some two months of instruction, compared to gains averaging only 0.5 grade levels in youth following the traditional adult basic-education curriculum for the same amount of time.[26]

A second critical ingredient in many of the more successful projects was the involvement of the private sector in providing relevant jobs, designing the curriculum, and/or developing job-related training. The Jobs for America's Graduates, Vocational Exploration Program, and Youthwork projects are examples of successful school-to-work transition programs with substantial private-sector linkages that have had a positive and continuing impact on the earnings and employment status of disadvantaged youth. The establishment of clear lines of responsibility between clients, training program, and work site, in conjunction with other good management techniques including performance standards, benchmarks, competency testing, and clear program objectives, were a third characteristic of successful programs.

Shortcomings of Employment and Training Programs

In reviewing employment and training programs for youth and, to some extent, for adults, five major shortcomings stand out. First, public job-creation programs, the largest category of CETA expenditures, often lacked effective transition mechanisms into unsubsidized jobs in the public or private sector. Second, few successful models for upgrading employees from secondary- to primary-labor-market jobs have ever been institutionalized, and almost no examples exist of federally supported retraining programs for laid-off workers. Third, the system has emphasized and rewarded short-term training programs at the expense of higher-quality, longer-duration training in the basic skills essential for jobs in the primary labor market of the future. As a result, CETA program gains can be attributed primarily to the placement function rather than to an increase in skills. Fourth, the lack of system coordination and of effective program design, accountability, and management at the lowest levels of service delivery has plagued the quality of employment and training programs. Concepts like performance-based contracting, benchmarking, competency-based testing, cross-referenced standards, sequencing, and sorting have remained on the margin of employment and training activities. Fifth, despite the existence of some promising examples, private industry has never been adequately involved in the design and operation of education and training programs, in part because they have not been approached through organizations that really represent their interests.

As a result of the general redirection of social programs proposed by the Reagan Administration, and in response to popular accounts of CETA abuses, Congress terminated the Public Service Employment program in 1981 and cut back other programs, thereby reducing total federal expenditures for employment and

training from $10 billion in FY 1980 to less than $4 billion in FY 1982. Funds to serve youth were reduced, in the same period, from $3 billion to approximately $1.4 billion. The new Job Training Partnership Act, which replaced CETA, passed in October 1982; it authorizes up to $3.7 billion, 70 percent of which must be used for adult and youth training only, beginning in FY 1984. Forty percent of the training funds must be used to serve economically disadvantaged youth. Both AFDC recipients and dropout youth are to be served according to their proportion among economically disadvantaged people in their service areas. The legislation lodges overall control of employment and training programs in the hands of governors by making them responsible for designating local service-delivery areas in jurisdictions with less than 200,000 residents, for certifying Private Industry Councils (which were established under CETA), for linking the program with state education agencies, and for approving local job-training plans. The new Act solicits and hopes to institutionalize business involvement in the design and delivery of employment and training programs on a scale unmatched by other social-program partnerships championed by the President's Task Force on Public-Private Partnerships. If business involvement is to be fully realized, a great deal of new ground will have to be broken in the development of new relationships and the design of new programs.

Unfortunately, meeting this challenge has been complicated by the voluntary withdrawal of the federal government and the involuntary withdrawal of community-based organizations as partners in the employment and training process. The federal government has significantly reduced its technical-assistance activities, has ended its initiation of experimental and demonstration activities, and has prematurely terminated research follow-up

efforts on the long-term impacts of some $750 million in previous experimental programs.

In addition, nonprofit and community organizations are not gaining access to the new partnerships being formed by local government and business to employ and train the disadvantaged. Many of these organizations, including the Opportunities Industrialization Centers, the Recruitment and Training Program, SER-Jobs for Progress, and the Urban League, were major providers of training under CETA. They had more rapport with, and better access to, the population in need of services than either government or business, and they were thus better advocates for, and recruiters of, the economically disadvantaged. They were important providers of world-of-work, job-search, job-development, basic-skills, and short-term training. Thus, they should clearly be regarded, in Washington and elsewhere, as full partners in the effort to develop new program models to serve at-risk populations.

Foundation Activities

Since the late 1950s, a number of private and corporate philanthropies, including the Ford Foundation, have sought to help address the employment-related problems of youth. Between 1950 and 1980, the Ford Foundation's old National Affairs Division allocated approximately $9 million for research and dissemination on the problem of youth employment. Principal recipients of support have been such intermediary organizations as the Manpower Demonstration Research Corporation (MDRC) and the Corporation for Public-Private Ventures (CPPV), frequently in concert with the U.S. Department of Labor. The MDRC-managed Supported Work, Youth Entitlement, and Career Opportunities projects and the CPPV-managed Ventures in Community Improvement

project have yielded some of the most reliable and valuable findings on employment and training programs for youth. Foundation support for the provision of direct services in the youth-employment arena has been minimal, with the exception of a 1979 grant to Jobs for Delaware Graduates, Inc., the forerunner of the now-nationally-expanding Jobs for America's Graduates program.

Other foundations working in the area of youth education, employment, and training include the Rockefeller Foundation, supporting research on employment opportunities for minority youth; the Edna McConnell Clark Foundation, assisting school-to-work transition programs; the Field Foundation, emphasizing redirection of the vocational education system; the Charles Stewart Mott Foundation, funding direct services and some policy studies on youth employment; and the Lilly Endowment, supporting programs in the area of juvenile-justice reform. Foundations have generally emphasized new model building and basic research, paying much less attention to delivery systems, replication, and the leveraging of existing government programs. Recently, several foundations have expressed new interest in sharing information and in joint project sponsorship, thus presenting new opportunities to influence education, employment, and training programs for youth.

STRATEGIES FOR THE FUTURE

The problem of youth employment is at base a problem involving educationally disadvantaged, inner-city minority youth. The evidence suggests that the youth-employment picture is likely to worsen in the coming years and that school dropouts will be the group most adversely affected. At the same time, the transformation of the labor market in response to technological change and international competition will continue, resulting in serious dislocations both for current workers and for new entrants to the labor force. But the primary federal employment and training system enacted to respond to these problems is engaged in its own organizational change as it closes down the CETA delivery system and builds a new system based on the states and the private sector.

Since, in this period of transition, new actors must be identified and new relationships developed with businesses and educational institutions, the philanthropic community is presented with an unusual opportunity to influence the structure of the new partnerships, the quality of the new training models, and the program-and-client mix of the new system. To achieve these objectives, the Foundation has identified four broad themes in which public and private organizations might focus resources: (1) developing the basic-literacy skills of dropouts and other high-risk youth through the improved use of competency-based curricula as well as computer-managed and computer-assisted instruction programs; (2) promoting public-private partnerships that address the range of training needs of high-risk and dropout youth; (3) supporting research and policy studies on youth, education, labor markets, and alternative forms of employment; and (4) clarifying the problems

of displaced workers and testing ways of adjusting to the structural transformation of the labor market.

Strategy I: Developing the basic-literacy skills of dropouts and other high-risk youth through the improved use of competency-based curricula as well as computer-managed and computer-assisted instruction programs

The increasing educational requirements of new entry-level jobs, combined with the accelerating decline in the number of blue-collar jobs that do not require basic literacy, necessitates a renewed emphasis on remedial learning. Since the 1960s, the Departments of Education, Labor, and Defense have spent millions of dollars to develop effective, individualized, self-paced remedial instructional materials for high-risk populations. Despite the previously cited effectiveness of the Job Corps materials developed under the Educational Improvement Effort and other special programs, teachers who work in school programs and in most human-service agencies and who are trying to reach dropout youths and low achievers continue to develop their own locally crafted curricula. The millions spent annually on adult basic education classes, on community- and school-sponsored remedial learning programs, and on the remedial education components of employment and training programs appear to have had little overall impact on the nation's illiteracy problem.

A recently completed Foundation review of voluntary tutoring programs, Adult Basic Education programs, basic-skills programs in the military and the Job Corps, and several model nonresidential remedial education programs, some of which rely on computer-assisted instruction, reached the following conclusions:

--Current literacy programs pay insufficient attention to nonreaders and to those reading at the 0-3 grade level, most of whom require one-to-one assistance.

--Literacy programs vary widely in curriculum, teaching methods, and quality control, and very few have been accompanied by impact studies and solid documentation of learning gain rates per hour of instruction.

--The limited number of rigorous evaluation studies available from the Job Corps, the military, and a South Carolina remedial education program suggest that individualized, self-paced forms of instruction, requiring successful completion of one lesson or competency unit before moving to the next, produce the largest reading gains.

--These gains decay quickly unless they are followed by job training and/or work experience that require the use of new skills.

--When basic-skills instruction is followed by appropriate training or employment experience, disadvantaged youth achieve substantial lifetime gains in earnings.

--Most of the programs that effectively link basic-skills instruction with training or work to produce these earning gains have been residential programs and fairly costly, at least in the short run.

--The most serious difficulty encountered in all basic-skills and job-training programs is keeping students engaged long enough to achieve the desired gains.

In the search for more effective approaches, computer-assisted instruction (CAI) and computer-managed instruction (CMI) are increasingly being considered and tested by community-based organizations, school systems, and human-service agencies as one means of addressing both basic-literacy and computer-literacy problems. The rush to purchase computer-education products and the demonstrated success of the Job Corps program in utilizing this technology presents a unique opportunity to influence the quality of the nation's remedial-education system as it operates in adult basic education programs in church-sponsored, nonprofit, and community organizations and in schools. The widespread use of computer-education programs provides an opportunity for the development of greater standardization and cross-referencing of curricula and tests.

Integrated with proven paper-and-pencil materials, computer-instruction

programs seem to be potentially well-suited to the specialized needs of both the remedial student and the teacher. For the student, CAI offers three key advantages: immediate feedback, totally individualized and self-paced instruction, and the reduction of discipline problems because the device is color-blind, non-judgmental, and intriguing. For the teacher who is responsible for a class of twenty students in a system where students enter and leave the program at almost any time and where skills range from barely literate to almost GED-ready, the computer as a manager of instruction may be as important as the computer as a medium of instruction. A CMI system linked to a test-grading machine can perform diagnostic testing, establish a student data file, prescribe the next series of lessons--either traditional paper-and-pencil or computer-assisted--and track student progress on a continuing, daily basis. Relieved of much cumbersome paperwork, the teacher can review, on a continuing basis, the progress of all twenty students, immediately identifying students stuck on a particular lesson and providing personal teaching assistance. In addition, CAI programs could conceivably enhance course substance, an important advantage so long as there is a shortage of qualified teachers of math and science.

In its recently released study on Informational Technology and Its Impact on American Education, the Congressional Office of Technology Assessment found substantial agreement that, for many educational applications, information technology can be an effective and economical tool for instruction. Despite the potential of CAI and CMI, and though an increasing number of schools and human-service agencies are purchasing microcomputers for educational purposes, the actual use of computers for education falls far short of their potential because of inadequate teacher

training, wide variability in the quality of instructional materials, and the difficulty of integrating computer materials with the regular curriculum. It is unlikely that the situation will improve quickly unless steps are taken to increase the knowledge of the user community, to actively develop and demonstrate model applications, to protect consumers where they have limited expertise, to assure better dissemination and screening of software, to explore new uses, to evaluate systematically the effectiveness of applications, and, perhaps most important, to address implementation issues at the delivery level.[27] The CAI and CMI fields are now characterized by a policy vacuum, by unrealized potential, by unexploited opportunities to leverage purchasing decisions, and by growing national significance.

In response to the remedial learning needs described above, the Ford Foundation has undertaken a number of program initiatives. These include studies of the effectiveness of competency-based and computer-instruction approaches by the Remediation and Training Institute; the awarding of a grant to the Educational Product Information Exchange Institute for a joint project with Consumers Union creating an independent consumer-information service for computer-instruction products; support for computer-assisted basic-skills training models; and the implementation of designs for vocational-education programs in human-service agencies that could be expanded to serve as model sites for experimentation with computer applications. In partnership with the Department of Health and Human Services and Control Data Corporation, the Foundation supported the establishment of three model Opportunities Industrialization Learning Centers, which will utilize a modified version of the Job Corps's paper-and-pencil curriculum and all of the audio-visual and computer-based instructional materials of a Control Data Learning Center, both

to offer better training to the traditional clients of Opportunities Industrialization Centers of America, Inc., and to generate revenues through the sale of educational services to industry, schools, and others.

These model projects could be linked with programs supported by other foundations and located throughout the country, serving as showcases for school and human-service personnel interested in computer-learning applications and considering purchases. These sites will contain a range of hardware and courseware systems, enabling ready comparison between, for example, Control Data's PLATO materials and Apple's computer-learning materials. The remedial computer materials will be integrated with a paper-and-pencil comprehensive competencies program of curriculum materials derived from the Job Corps's academic-skills program and the Adult Performance Level program's functional competencies curriculum, and cross-referenced with the curriculum and standards of nearby schools as well as military entrance examinations; purchasers would have the opportunity to observe students and teachers actually utilizing the system. Each model program would have a technical-assistance capability, provide teacher training, user-needs assessments, sample bidding specifications, sample scheduling plans, and examples of various user alternatives for maximizing computer usage. The laboratories would host conferences, provide a setting for experimentation and evaluation in the full range of remedial-education approaches, and participate in national consumer evaluations of hardware and courseware. Finally, as in the OIC projects, and with the objective of preventing skills decay, these remedial education programs would be linked to vocational training and job placement programs so that early grade-level gains in skills could be built upon as they have been in the Job Corps and military examples.

Strategy II: Promoting public-private partnerships that address the training needs of high-risk and dropout youth

Partnerships. Designing and implementing more effective employment and training programs for high-risk youth requires the active and continuing involvement of business organizations, governments, training institutions, schools, and community organizations. Past training programs for the disadvantaged failed to engage business, did not offer high-quality training, and often ignored the need to link education and work. Success requires that each partner participate equally, emphasizing the areas in which it has an advantage. A danger posed by the emphasis of the new job-training legislation exclusively on business involvement is that the role of community and nonprofit organizations will be ignored. In the process of developing programs to support the institutionalization of effective public-private partnerships in the employment and training field, the Foundation has held a series of forums with business leaders, executives of other nonprofit organizations, and other potential partners to get their views on the future direction of the field.

Ideas that were discussed with these groups included strengthening community organizations; providing program guidance and organizational direction to business partners; promoting more effective state and local decision making in the reallocation of reduced employment, training, and education funds for youth; and monitoring the implementation of the new Job Training Partnership Act. Discussions to date with major employer organizations including Chicago United, New York City's Partnership, Pittsburgh's Allegheny Conference, and the Cincinnati Resource Development Group have confirmed the value of intermediary organizations during this early

transition stage in the formulation of new partnerships.

In response, the Foundation has awarded grants to the Corporation for Public/Private Ventures of Philadelphia, Pennsylvania, the Manpower Demonstration Research Corporation of New York City, and Martin and Rosi, Inc., of Richmond, Virginia, to undertake multistate demonstration projects with states seeking to rationalize and improve the coordination of education, social service, and employment training programs available for youth; to work with private industry councils, chambers of commerce, and other business organizations in concert with community organizations to increase the quality and the number of training opportunities for dropout youth; and to encourage collaboration between businesses and schools designed to smooth the school-to-work transition for at-risk youth.

In response to dwindling training resources for the disadvantaged, a variety of organizations are attempting to identify other sources of training opportunities, funds, equipment, and facilities--in short, new partners for employment and training programs. The military-training facilities located on most military bases have provided both formal and informal training and recreational activities for civilian youth since such programs were begun in response to the civil disturbances of the late 1960s. Some of these efforts have been targeted at specific civilian job needs of the military, including office occupations, supplies, and services, while others involved formal relationships with local CETA programs. Pending the results of an assessment being conducted with Foundation support by MDC, Inc., a North Carolina-based research and technical assistance group, these organizations might want to pursue strategies to increase both the scale and the quality of their programs. The health-care system, a major trainer and employer with special

responsibilities based on the support it derives from Medicare, Medicaid, and other public sources, might provide another opportunity for expanding training programs. Community colleges, apprenticeship systems, and industry-based training may provide additional alternatives.

Models for High-Risk Youth. This review of exemplary employment and training programs has implied a need for a system of sequenced training programs for dropouts. The first level of training under such a system would emphasize basic skills and short-term, world-of-work training, while the second level would consist of longer-term, higher-quality training programs for occupations in the primary labor market. If these models for dropouts are not developed, business-controlled dollars for employment and training may be disproportionately focused on in-school youth, who are easier to work with than dropouts, and on programs for those in the 20-to-24-year-old age group who are out of school but better qualified than their peers. Replication and further testing of the Comprehensive Opportunities Project, an education-linked Jobs for Youth program, and other model programs that link community organizations and private business in programs providing both job-relevant education and employment to dropouts and other high-risk youth are recommended as first-level programs. These programs would emphasize the acquisition of basic skills by making participation in an alternative school and completion of the general equivalency exam prerequisites for a job.

Under an additional set of model-building initiatives, this first tier of training programs would be followed by a second tier of programs of longer duration and higher quality. These in turn would lead to jobs in the primary labor market in fields with an expanding demand for labor and starting wages

at levels permitting self-sufficiency.

Traditional short-term, first-tier training programs like those described above could be prerequisites for the second-tier, or sequenced, group of programs, and thus could act as self-selecting sorting devices for identifying those eligible for such higher-quality programs. Those who successfully complete a basic-skills program could be enrolled in a computer, electronic repair, machinist, line-repair, or other training program and provided a relevant, mentor-supervised part-time job and supportive services that would lead to credentialing and a full-time, primary-labor-market job. Each program would be designed and operated by a partnership of community organizations, businesses, and training institutions. The objective is to build a set of linked models for replication by the new training system, to demonstrate to employers that successful programs can be developed for all levels of the entry-level workforce, and to alter the human-resource versus increased-mechanization equation.

When resources are tight, it becomes more important than ever for expensive, longer-duration, higher-quality training slots to be reserved for those youth who have proven their ability and perseverance by successfully completing lower-level remedial education or other training courses. In this way, youth have the opportunity to select their own educational attainment levels, and every young person, whether the third-grade-level reader or one ready to complete the GED, can enter a training ladder that contains appropriate stop-off points for jobs at various levels of the job market. In today's system, the pressure to cream has blocked those at the bottom of the education and employment ladder from finding such a path up and out.

Most important of all, these model programs will stress the importance

of all partners assuming the tasks they are best qualified to undertake. An early grant to the South Bronx Development Organization, in which general assistance recipients who successfully clean and green neighborhoods, work in community agencies, and repair buildings are moved into higher-quality training slots sponsored by private businesses, is one example of such a sequenced set of programs. Recent efforts by the New York City Private Industry Council to identify successful graduates of the Bank Street Basic Skills Academy, the Jobs for Youth program, and other first-tier programs as feeding programs for its more advanced electronic and other skill-training programs, is another good example of a cost-effective systems approach for serving dropout youth.

Revenue Generation and Trainee Businesses Serving High-Risk Youth. In the period when resources for employment and training programs were plentiful, revenue generation by such programs to help cover the cost of their operation was viewed as an appropriate, but secondary, objective. As federal funds were reduced, however, program operators gained renewed interest in revenue generation and a new commitment to increasing the size of the take. Training programs in construction and building rehabilitation, in word processing, and in other fields have begun to operate as small-business spinoffs. Training objectives have had to take an equal, sometimes even a secondary role to the objective of business profit. A cursory staff review of combined training and small-business programs identified projects in Milwaukee, New York City, Chicago, and Baltimore that are close to meeting their costs. In some sites, carpentry trainees also work in for-profit building rehabilitation projects bid on by the business spinoff; in another, an office-skills training program

includes on-the-job training in a temporary-help business that the training program's parent organizaton began. These programs have generally had cash-flow problems, some difficulty in accurately estimating and bidding on jobs, and limited success in identifying and capturing protected markets. Equally important, the number of trainees is small and the nature of the training process itself appears to suffer as the profit motive gains in importance.

Clarifying this conflict between revenue generation and the maintenance of minimal training program standards is an area that merits the attention of public and private organizations concerned with training. Identifying potential obstacles to effective business management (including those in the areas of planning, accounting, and marketing) would also be useful. Minimum standards for training programs should be set and maintained.

Strategy III: Supporting Research and Policy Studies Involving Youth, Education, Labor Markets, and Alternative Forms of Employment

During this period of transition, it is essential that the lessons of past successes and failures among employment and training programs be distilled. The Ford, Mott, Clark, and Rockefeller foundations have provided support to organizations well-positioned to formulate and disseminate findings from special federal demonstration programs initiated in 1979 under YEDPA but prematurely terminated by the Department of Labor in 1981 and 1982. State and local planners, program managers, and others should be encouraged to make maximum use of this information.

The potential for improving the education, training, and employment system is another area deserving inquiry. The CETA system, the

vocational-education system, and the public secondary-school system have all tended to build separate, isolated, and frequently overlapping systems for training, education, and employment. These separate institutions have guided U.S. policy in competing and frequently noncomplementary directions. Studies in this area would identify points of leverage for collaboration and consolidation of these systems and would consider a broader range of alternatives for funding and delivering our nation's employment and training programs. One obvious model is the concept of a lifetime training account as exemplified by the G.I. Bill; another is the Unemployment Insurance Fund; another is the business-centered-and-supported European training model; yet another is the apprenticeship model.

A third policy area for study is the insufficient number of available jobs for youth. The Civilian Conservation Corps of the 1930s and the public-service employment programs of the 1970s were created in response to the insufficient number of jobs available to the unemployed. While public employment programs have been disparaged by the new Administration, alternative policies that might increase the demand for youth must be explored. Both conservation corps and national service approaches have been suggested as possible ways of increasing the demand for youth by the labor market and of providing the education, the socialization, and the employment credentials required in the primary labor market. A study by Hamilton, Rabinowitz and Szanton under a Foundation grant will clarify the conceptual, operational, and policy issues of a national-service program linking youth employment, conservation needs, and military manpower requirements. Evaluations of existing state conservation corps programs could also provide useful information on issues of operational feasibility, cost, value to the

community, and, most important, the impact of public service on the future employability and earnings of young people.

Another set of issues concerns the development of linkages between the economic development efforts of states, cities, counties, and communities and employment and training programs. For example, public and private lenders might include a requirement that large loan recipients, especially those in development and other projects with potentially significant social consequences, identify an existing training program as a source of workers. Communities approving cable-TV franchises could be encouraged to require similar linkages. Federal, state, local, and nonprofit organizations like the New York Health and Hospitals Corporation could be asked to target a portion of their purchasing power to enhance the job opportunities of low-income individuals and youth graduating from training programs. Similarly the feasibility of linking bridge-building, subway-construction, and other public-works programs with the training, employment, and upgrading needs of the unemployed and underemployed could be explored. Finally, the strategies of new business start-up, employee ownership, and business preservation in decaying neighborhoods (all discussed below) are also relevant to the needs of economically disadvantaged workers and, thus, of minority youth.

Strategy IV: Clarifying and Testing Ways in Which Displaced Workers Can Adapt to Structural Transformation of the Labor Market

The microprocessor revolution has entered both the office and the factory, where it may have a significant impact on U.S. industrial organization and occupational structures. While some new jobs will be created, some existing ones will be eliminated. As a result, the basic educational and job-specific

skills required of workers are undergoing change. Much of the current problem of worker displacement is inextricably linked with the 1981-82 recession, but once the economy recovers, the outmoded skills of many displaced workers will significantly impair their ability to find new jobs, exacerbating the nation's long-term structural unemployment problem. Much of the immediate impact appears to be concentrated in specific industries and geographic locations and among certain groups of workers. But many experts believe that the problems associated with plant closings will continue as the transition from an industrial to a postindustrial economy proceeds. Efforts to document the projected dimensions of the problem and to determine its implications for displaced workers and entry-level disadvantaged youth could make a valuable contribution both to our understanding of the problem and to its solutions. Comparative studies with other industrial countries might also be useful.

Next, it may be important to examine the essential elements of adjustment at the government, community, company, union, and individual levels. These include: (1) early warning policies documenting signs of plant disinvestment; (2) minimum prior-notice requirements to workers before a closing; (3) combined outplacement, job search instruction, and career counseling programs offered on the job, after the closing, and after exhaustion of unemployment insurance benefits; (4) job-sharing arrangements; (5) relocation benefits; (6) retraining accounts financed like pension plans; and (7) worker buy-out options. Each of these approaches would require changes in the way the unemployment insurance system, the U.S. Employment Service, unions, and economic-development agencies operate.

Third, a closer examination of worker ownership might also be explored. In the search for alternatives to unemployment, various forms of

employee ownership, almost unheard of a decade ago, have begun to receive increasing attention from a broad range of liberal and conservative officials. There are now approximately 5,000 employee-ownership plans and about 250 majority employee-owned companies, including such well-known firms as the Rath Packing Company, The Milwaukee Journal, Hyatt-Clark Industries, and the Chicago and Northwestern Railroad. Presently, employees and management at A&P Supermarkets in Philadelphia, at the Philadelphia-based Consolidated Rail Corporation (Conrail), and at Wierton Steel, in West Virginia, are negotiating worker buy-outs to prevent company closings. Four states (Maryland, Delaware, Michigan, and New Jersey) have passed legislation encouraging broadened capital ownership. An increasing number of state and city economic development units have also begun to examine employee stock ownership plans as a means of financing business expansion. In addition, academic studies comparing various forms of worker-owned companies with traditionally owned and managed companies have begun to suggest that employee ownership is associated with an improved industrial-relations climate and increased profitability.

Yet many students of plant buy-out schemes caution that the years of disinvestment in equipment and plant modernization that usually precede a closing make worker ownership a poor risk. One option is to develop mechanisms for pinpointing the early symptoms of an impending company shutdown and to initiate buy-out schemes before disinvestment reaches irreversible levels. In addition, worker buy-outs do not have to be concentrated in large industrial companies that have extensive modernization needs and that face more efficient foreign competition. Expanding small businesses employing a hundred employees or less are responsible for more than half of all new job

creation in the United States. Worker ownership might be more effectively focused on small enterprises located in stabilized urban areas.

While worker ownership has been viewed as a job-saving strategy in the United States, other countries have viewed it as a job-creation strategy. The most prominent example is the worker cooperative movement in Mondragon, Spain, where there are more than a hundred industrial cooperatives and four superstructure cooperatives (the latter of which provide insurance, banking, school, and research services to the former) employing 20,000 worker-members. During the last twenty-five years, the entrepreneurial division of one of the superstructure cooperatives has been responsible for the creation of nearly a hundred firms, including some of the largest producers in Spain; only one firm has failed. A closer examination of the Mondragon cooperative movement for relevant job-creation and new business start-up lessons might provide useful information.

One of the most important advantages of worker ownership may be the opportunity it provides low-income workers to develop equity and job security in a successful company. In a period when more than a quarter of the labor force averages less than the minimum wage for the hours they work and for which they are available for work, it is essential that we experiment with innovative means of generating employment and of addressing low-earnings problems. A combined Program-Related Investment and grant to the Industrial Cooperative Association, for the establishment of a revolving loan fund supporting development of small business cooperatives through either the buy-out of retiring owners or the start-up of new businesses, should provide important feedback on the feasibility of worker-ownership strategies for low-income individuals.

Additional Foundation-supported initiatives include studies of the legislative, financial, tax, pension fund, and union-related impediments to worker ownership. The Foundation has also supported a symposium on the Rath Packing Company and A&P buy-out experiences. The feasibility of linking worker ownership with state, local, and community economic development efforts is also being explored. While worker ownership is a fledgling concept that so far has achieved only mixed results at best, the continuing interest in it by so many people seeking to save old jobs or create new ones suggests that both its successes and its failures to date deserve careful scrutiny.

CONCLUSION

The issues discussed here have been selected because they address the causes of unemployment rather than the symptoms, because they offer an opportunity both to leverage existing institutions and to enhance the effectiveness of those institutions, because they represent an innovative alternative at a moment when a new vision is essential, and because they focus on a special group of individuals who are likely to be forgotten or ignored by existing programs and policies. For example, the emphasis on computer-based instruction would utilize the growing interest in computer learning to leverage standardized curriculum, competency-based instruction, and individualized learning approaches into previously unreachable remedial learning systems. Similarly, the partnership models combining work and education would attempt to influence the direction and program content of the new Job Training Partnership Act in favor of both a more efficient and a more equitable level of service for dropout youth. Worker-ownership and other employment projects would encourage innovation in areas where new answers are needed but where both the public and the private sectors have been unable or unwilling to experiment.

Employment has remained the solution of choice for the poverty-related problems of the economically disadvantaged, from welfare dependency to crime. But in recent years faith in the employment and training programs that were designed to redress many of these problems has waned considerably. The accomplishments of these programs, measured in annual gains of no more than a few hundred to a few thousand dollars per participant, seemed to many inadequate in relation to the magnitude of the income and earnings problems of

the poor. But these so-called "limited" accomplishments may in fact be, at least in part, a function of the limitations of social research techniques in providing valid measures of program success. Another part of the problem may have been our society's inclination to saddle single-dimensional social programs with unrealistic expectations for solving multidimensional social problems. If we have learned anything, it is the need for modest expectations and multiple approaches. And we have been unduly impatient with the managers of these new enterprises, too quick to change the rules of the game, too fickle in our yearly dollar commitments, and too willing to choose something new over something tried. After all, whether it is a JTPA private-industry council, a CETA prime sponsor, or a MDTA community organization that is managing and delivering an employment training service, the basics will still be there: job counseling, job development, world-of-work instruction, support services, on-the-job training, vocational classroom training, or remedial instruction. Furthermore, the same street-level counselors and instructors will be delivering those services. Improving effectiveness at the point where instructor meets client by providing adequate and stable resources, improving the connections between diverse programs, sharing information from proven program approaches, rewarding performance, and guaranteeing access to this full range of programs for those most in need are likely to be more significant than a systems change that begins at the top. Concomitant with society's expectation that all able-bodied citizens will support themselves is a societal obligation to provide sufficient employment and training opportunities on every street corner for all of its citizens. Unlike the similar period of reflection on social programs that occurred in the 1970s, evidence is now available from the Supported Work, Job Corps, classroom

training, Head Start, and Title I programs, to name a few, suggesting that carefully conceived treatment programs can produce modest gains in employment, education, and earnings. The task that remains is to intensify and extend those impacts.

The emphasis placed here on learning centers, partnerships, links between work and education, and the establishment of a training ladder that reaches from nonreader to electronic technician and beyond is intended to suggest what some of those intensified opportunities might look like. In the final analysis, the ultimate success of these employment and training approaches will depend on our willingness to target limited resources on those most in need, and most critical of all, our willingness as a nation to generate enough jobs for all.

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